

CLAIM AMENDMENTS

1. (Currently Amended) A medical lead, comprising:
an electrically insulative membrane having a first stiffness and ~~an~~ tissue-contacting outer surface;

a resilient skeletal spring layer disposed on the tissue-contacting outer surface of the insulative membrane, wherein the spring layer has a second stiffness greater than the first stiffness;

and

at least one electrode associated with the insulative membrane.
2. (Original) The medical lead of claim 1, wherein the insulative membrane is flaccid.
3. (Original) The medical lead of claim 1, wherein the insulative membrane is paddle-shaped.
4. (Original) The medical lead of claim 1, wherein the insulative membrane is tube-shaped.
5. (Original) The medical lead of claim 1, wherein the spring layer is configured to urge the insulative membrane into a planar geometry.
6. (Original) The medical lead of claim 1, wherein the spring layer is configured to urge the insulative membrane into a curvilinear geometry.
7. (Original) The medical lead of claim 1, wherein the spring layer wraps around onto itself.
8. (Previously Presented) The medical lead of claim 1, wherein the insulative membrane has two outer opposing surfaces, the spring layer is associated with one of the two surfaces, and the at least one electrode is associated with the other of the two surfaces.

9. (Previously Presented) The medical lead of claim 1, wherein the insulative membrane has two external opposing surfaces, and the spring layer and the at least electrode are associated with the same one of the two surfaces.

10. (Original) The medical lead of claim 1, wherein the insulative membrane, spring layer, and at least one electrode form a body that is configured to inhibit tissue growth.

11. (Original) The medical lead of claim 1, wherein the insulative membrane, spring layer, and at least one electrode form a body that is configured to be collapsed into a compact form for percutaneous delivery into a patient.

12. (Original) The medical lead of claim 1, wherein the insulative membrane, spring layer, and at least one electrode form an expanded body that is sized to fit within the epidural space of a patient.

13. (Original) A method of treating a patient, comprising:
placing the medical lead of claim 1, into a collapsed state by applying a compressive force to the medical lead;

percutaneously delivering the collapsed medical lead into the patient adjacent tissue to be treated; and

placing the medical lead into an expanded state by releasing the compressive force, whereby the resilient spring layer facilitates expansion of the medical lead.

14. (Original) The method of claim 13, further comprising stimulating the tissue with the medical lead.

15. (Original) The method of claim 13, wherein the tissue is spinal cord tissue.

16. (Currently Amended) A medical lead, comprising:

an electrically insulative membrane having a longitudinal axis and a tissue-contacting surface;

a resilient spring element associated with the tissue-contacting surface of the insulative membrane, wherein the spring element comprises a main segment that extends along the longitudinal axis and a plurality of secondary segments that branch off of the main segment; and
at least one electrode associated with the insulative membrane.

17. (Original) The medical lead of claim 16, wherein the insulative membrane is flaccid.

18. (Previously Presented) The medical lead of claim ~~16~~, 16, wherein the insulative membrane is paddle-shaped.

19. (Original) The medical lead of claim 16, wherein the insulative membrane is tube-shaped.

20. (Original) The medical lead of claim 16, wherein the spring element is configured to urge the insulative membrane into a planar geometry.

21. (Original) The medical lead of claim 16, wherein the spring element is configured to urge the insulative membrane into a curvilinear geometry.

22. (Previously Presented) The medical lead of claim 16, wherein the insulative membrane has two outer opposing surfaces, the spring element is associated with one of the two surfaces, and the at least one electrode is associated with the other of the two surfaces.

23. (Previously Presented) The medical lead of claim 16, wherein the insulative membrane has two outer opposing surfaces, and the spring layer and the at least electrode are associated with the same one of the two surfaces.

24. (Original) The medical lead of claim 16, wherein the secondary segments bilaterally branch off of the main segment.

25. (Original) The medical lead of claim 16, wherein the secondary segments unilaterally branch off of the main segment.

26. (Original) The medical lead of claim 16, wherein the insulative membrane, spring element, and at least one electrode form a body that is configured to inhibit tissue growth.

27. (Original) The medical lead of claim 16, wherein the insulative membrane, spring element, and at least one electrode form a body that is configured to be collapsed into a compact form for percutaneous delivery into a patient.

28. (Original) The medical lead of claim 16, wherein the insulative membrane, spring element, and at least one electrode form an expanded body that is sized to fit within the epidural space of a patient.

29. (Original) A method of treating a patient, comprising:
placing the medical lead of claim 16 into a collapsed state by applying a compressive force to the medical lead;
percutaneously delivering the collapsed medical lead into the patient adjacent tissue to be treated; and

placing the medical lead into an expanded state by releasing the compressive force, whereby the resilient spring element facilitates expansion of the medical lead.

30. (Original) The method of claim 29, further comprising stimulating the tissue with the medical lead.

31. (Original) The method of claim 29, wherein the tissue is spinal cord tissue.

32. (Currently Amended) A medical lead, comprising:
an electrically insulative body having a tissue-contacting planar region;
a resilient skeletal spring element in contact with the tissue-contacting planar region of the insulative body; and
at least one electrode associated with the planar region.

33. (Original) The medical lead of claim 32, wherein the planar region of the insulative body is flaccid.

34. (Original) The medical lead of claim 32, wherein the planar region of the insulative body is paddle-shaped.

35. (Original) The medical lead of claim 32, wherein the planar region of the insulative body is tube-shaped.

36. (Previously Presented) The medical lead of claim 32, wherein the planar region of the insulative body has two outer opposing surfaces, the spring element is associated with one of the two surfaces, and the at least one electrode is associated with the other of the two surfaces.

37. (Previously Presented) The medical lead of claim 32, wherein the planar region of the insulative body has two outer opposing surfaces, and the spring element and the at least electrode are associated with the same one of the two surfaces.

38. (Original) The medical lead of claim 32, wherein the insulative membrane, spring element, and at least one electrode form a body that is configured to inhibit tissue growth.

39. (Original) The medical lead of claim 32, wherein the insulative membrane, spring element, and at least one electrode form a body that is configured to be collapsed into a compact form for percutaneous delivery into a patient.

40. (Original) The medical lead of claim 32, wherein the insulative membrane, spring element, and at least one electrode form an expanded body that is sized to fit within the epidural space of a patient.

41. (Original) A method of treating a patient, comprising:
placing the medical lead of claim 32 into a collapsed state by applying a compressive force to the medical lead;

percutaneously delivering the collapsed medical lead into the patient adjacent tissue to be treated; and

placing the medical lead into an expanded state by releasing the compressive force, whereby the resilient spring element facilitates expansion of the medical lead.

42. (Original) The method of claim 41, further comprising stimulating the tissue with the medical lead.

43. (Original) The method of claim 41, wherein the tissue is spinal cord tissue.

44. (Previously Presented) The medical lead of claim 16, wherein the insulative membrane has an outer surface, and the spring element is in contact with the outer surface of the insulative membrane.

45. (Previously Presented) The medical lead of claim 32, wherein the planar region of the insulative body has an outer surface, and the spring element is in contact with the outer surface of the planar region.

46. (Previously Presented) The medical lead of claim 16, wherein the spring element is in a laminar relationship with the insulative membrane.

47. (Previously Presented) The medical lead of claim 32, wherein the spring element is in a laminar relationship with the insulative body.